

Title (en)
METHOD AND APPARATUS FOR SINGLE PARTICLE DEPOSITION

Title (de)
VERFAHREN UND VORRICHTUNG ZUR EINZELPARTIKELABSCHIEDUNG

Title (fr)
PROCÉDÉ ET APPAREIL DE DÉPÔT DE PARTICULES INDIVIDUELLES

Publication
EP 3453455 A1 20190313 (EN)

Application
EP 17189875 A 20170907

Priority
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Abstract (en)
A method of depositing single particles (1) onto a target (2) comprises the steps of loading a particle suspension (3) to a droplet dispenser (10) having a suspension reservoir (11) and a nozzle section (12), wherein the droplet dispenser (10) is capable of dispensing droplets having a predetermined first droplet volume, detecting a presence of particles in the nozzle section (12), controlling the droplet dispenser (10) based on a test procedure, which is capable of (i) testing a single particle condition of the droplet dispenser (10), wherein it is determined whether a predetermined first ejection region (13) of the nozzle section (12) includes one single particle (1) and a sedimentation region (14) adjacent to the ejection region (13) is free of particles, wherein the sedimentation region (14) is a zone through which particles are displaced to the ejection region (13) by sedimentation during an operation delay interval between the step of detecting the presence of particles and a step of operating the droplet dispenser (10), and (ii) testing at least one of a zero particle condition of the droplet dispenser (10), wherein it is determined whether a predetermined section of the droplet dispenser (10) is free of particles to be dispensed, and a particle type condition, wherein it is determined whether detected particles have a predetermined particle type, and operating the droplet dispenser (10), wherein, in dependency on the single particle condition, the zero particle condition and/or the particle type condition, one droplet is dispensed onto the target (2) or at least one droplet is discarded into a collection reservoir (5). Furthermore, a dispenser apparatus (100) is described, which is adapted for dispensing droplets including single particles onto a target (2).

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Citation (applicant)
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